UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER IN WASHINGTON Monday, September 16, 1929

NOT FOR PUBLICATION

Livestock Interview No. 1: Hereditary Factors in Livestock Breeding

Speaking Time: 10 Minutes.

ANNOUNCEMENT: We are opening today a new series of farm programs in cooperation with the United States Department of Agriculture. And we are introducing to you a new radio friend -- Your Farm Reporter in Washington. He is just that, a reporter, digging up for you in the vast accumulations of statistical and scientific fact at your Federal Department of Agriculture the things that you want to know. On Monday his reports will be especially for stockmen, on Tuesday for crops growers, on Wednesday for poultry raisers, on Thursday he will bring you the details of new developments in the field of agricultural cooperation on which the interest of America now centers, and on Friday he will present new things for dairymen.

He appeals for your help in making these periods of the most value and interest to all of you. Won't you let us know what farming problems are most puzzling to you just now? That will guide us and the Department of Agriculture in directing the Farm Reporter on his daily rounds. Let's go, now, with his first livestock talk. We have assigned him the job of finding out and passing on to you some of the facts on heredity in animals -- the very basis of improvement of our herds and flocks. Gentlemen, your Farm Reporter.

---ooOoo---

My best wishes to you, friends, We'll be better acquainted soon. When we are, I hopt to have your best wishes, and your interest, and your assistance. Tell me what you want to know, and I'll try to dig up the facts.

For today, I was assigned to gather in at the U. S. Department of Agriculture some information on the principles of heredity, and how they can be used in practical animal breeding. Naturally, I went to the genetics investigations section in the Bureau of Animal Industry at Washington. And there I found the facts, interestingly given, by Mr. O. N. Eaton.

Mr. Eaton's old home is New York, but for eleven years he has been down in Washington experimenting, investigating, and working in the fields of heredity and genetics. I found Mr. Eaton in his laboratory busy with guinea pigs, white rats, charts, maps, and everything bearing on the subject of heredity. I could have stayed in that place all day--- it was interesting--- but I had come for a specific purpose--- to get information on heredity, and I told him, as we looked around over the laboratory, that I thought I had certainly come to the right place.

"Well, I don't know," he said, as he picked up a guinea pig and weighed it on a set of very accurate scales. "Just what do you want to know about heredity, anyway?"

Knowing Mr. Eaton was a busy man I lost no time in getting to the point. I said, "I want some specific and direct information on this mysterious thing they call heredity. I want to know if it influences economic livestock production-- by a scientific use of hereditary laws can we put more meat on the stock's back, more milk in the bucket, and more eggs in the nest?-- I want to know if livestock men would profit by having a better scientific understanding of heredity."

"Oh, yes, I think I get your point," Mr. Eaton said as he took a seat on top of a guinea pig cage. "I'll begin by giving you a little informal education in genetics. Do you know how an animal is made?" he questioned me.

"No, I do not," I replied. I did have my own idea, but I was not going to cut off any information by saying I knew.

"A young animal starts on its career," Eaton began, "when two bits of hereditary material unite. One part of this material is from the male and the other is from the female. When the union is complete, the sex, identity, and individuality of that animal are settled for life. Heredity stops with the union of the matter. From then on the fate of the animal depends on nourishment and environment. Chance plays an important part in the production of animals and even people."

This was sounding all right to me, but I was after something specific, so I broke in by saying, "Mr. Eaton can you actually breed horns off of cattle?"

Instead of answering me directly, Mr. Eaton continued his lesson in genetics: "In heredity we have pairs of contrasted characters, as colored, colorless; horned, hornless, etc. One we call dominant because in a cross between animals or plants, one showing, let us say, the colored character, the other the colorless, the offspring will be colored, or the colored character has the power of hiding or excluding the uncolored condition. The uncolored character is said to be recessive. Now, if we mate a Red Polled bull, which shows the dominant character, to a Hereford cow which has horns, representing the recessive character, all her calves will be hornless.

"Now let us breed some of her calves together or to another calf produced in exactly the same manner. Some of the calves will have horns, some will not. This is because the calves had parents with contrasting characters and, therefore, the calves themselves have the ability to produce offspring showing either character. Those with horns will always produce horned offspring, but the hornless will produce two classes of young, one called pure dominant, always producing polled progeny, the other producing this mixture of part horned and part polled again. These two classes cannot be distinguished except by breeding tests. Therefore, it is possible to breed horns off of cattle, provided selective breeding is carried on long enough, always using the hornless animals after the first cross has been made."

Still after Mr. Eaton for more information, I said, "Tell me, is there anything to telegony?"

"No--" he shot back as he shifted his position on the cage. "Some people today," he said, "believe that a black cow bred to a fine white bull will drop a white calf, and that all her future calves will have some white markings running back to the white bull regardless of the sires used. Nothing to it I tell you. No scientific foundation for such belief."

"Your logic sounds all right," I cut in, and inquired, "What is this thing they call prepotency?"

"That," he said, "is the ability of an individual to transmit his qualities to his offspring. Dairying is a good example. Breed a scrub cow to a fine dairy bull and the calf may be a better milker than her mother. Remember now that prepotency is a characteristic and has nothing to do with vigor, or masculine appearance."

Thirsty for more facts on this ever-interesting puzzle of the life-process, I put another question: "How do you account for a respectable, purebred black and white Holstein cow bred to a purebred black and white Holstein bull dropping a red calf?"

"Heredity, man--heredity." Mr. Eaton shot back. "You see," he said as he dropped his arm down in a cage for a white rat to climb up on, "In Holsteins the dominant colors are black and white, but back behind these colors you will find red as a recessive color, and now and then it bobs out. The calf is purebred all right, but the association won't allow it to be registered". As Mr. Eaton polished that one off, I had another ready.

"How about inbreeding?"

"It's a powerful factor, and a dangerous tool in the hands of the unskilled," he replied. "In our laboratories, we have bred and inbred guinea pigs for 23 years, twenty-nine generations, and 34,000 pigs have passed under our observation. Sometimes inbreeding has been good and sometimes bad. Twenty-five generations of white rats have been inbred with fair results. Close inbreeding like mating brother and sister, sire and daughter should be left to the experienced breeder who has some knowledge of the scientific laws of heredity."

"Now, Mr. Eaton," I said, "how about the farmer who has the calf tracing back to the $50,000 World's Fair Champion Bull?"

"Well," said the scientist, "It depends on many things. In heredity we can usually depend upon the dominant or prepotent qualities and characteristics to come true for the first three or four generations, but as more and more outside blood is introduced, more and more will the qualities of the fine bull be lost. This is a good point to remember in buying and breeding livestock."

Continuing, Mr. Eaton said, "In the beginning you asked me if a study of hereditary laws could be of any help to the livestock breeder. Yes, it can. With an understanding of the scientific laws of heredity and the other factors along the same line, it is possible to breed up better animals and make more money from the livestock game."

"Just one more thing, Mr. Eaton," I said as he started towards the white rat cage to resume his work. "What have you discovered about sex control?"

"Nothing that can be applied in a practical way," he shot back, quick as a flash. "Toss a coin a thousand times," he added, "and you will find that it lands heads up about 500 times, and tails up about 500 times. The law of averages enforces itself. Similarly, the sexes just about even themselves up in the long run."

Lots more Mr. Eaton told me, but now the clock tells me I'm through for today. I'll have to refer you to a publication he gave me, Farmers' Bulletin 1167-F, entitled "Essentials of Animal Breeding." Until tomorrow, so long, and thanks for your attention.

--ooOoo--

ANNOUNCEMENT: Get the number and title of the bulletin? I'll repeat it: Farmers' Bulletin 1467-F, "Essentials of Animal Breeding." A copy is yours for the asking. Direct your requests to the Farm Reporter at Station_____ or at the United States Department of Agriculture, Washington, D. C. Your questions, and suggested topics for future reports by your radio representative in the Department of Agriculture also may be sent to us or to the Department. Tomorrow, an interview especially for crops growers.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON
(Regions 3 and 5)

Tuesday, Sept. 17, 1929

Crops and Soils Interview 1-a: Watch the Cull Pile!

Speaking Time: 9 Minutes

ANNOUNCEMENT: Every week day except Saturday we have a report from our farm reporter at Washington. We instruct him to go to the specialists of the United States Department of Agriculture, talk to them face to face, and report their answers back to you direct by radio. This week, we told the Farm Reporter to find out what we could do about all these fruit diseases that have been cutting down our orchard profits.------- Here is the Farm Reporter now ----- What did you find out?

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Good afternoon, friends!

When the boss instructed me to get some help for you on fruit diseases, I thought he had his dates mixed. "Here at picking time?" I said to myself, "It is 'too late for fungicides now!'"

But I had no trouble knowing where to go to ask about fruit diseases. Dr. M. B. Waite has been studying the troubles of orchard fruits right in the United States Department of Agriculture for forty years. He has worked out remedies for many plant diseases. Fact is, when I called on him, he was looking at some disease-resistant pears he is now developing in the Department's orchard.

When I told him what I wanted, he smiled. "Picking time," he said, is probably the very best time to find out what your fruit troubles are and plan to fight them. The cull pile in a commercial orchard has in it a collection of all the fungous diseases and other troubles which have attacked the fruit during the season.

"When I go out investigating fruit diseases, I go to the cull pile. In one orchard I visited there were 20 carloads of fruit in the cull pile on account of peach brown rot. That was a fourth of that man's crop. That just shows you how heavy the losses sometimes are from some of these diseases.

"It is true," Dr. Waite went on, "that the work of the peach leaf curl fungus very rarely shows in the cull pile. Peach leaf curl mainly destroys the leaves in early spring. And the peach gumming fungus of the Pacific Coast only occasionally shows badly on the mature fruit. But the peach scab fungus, the peach brown rot, peach bacteriosis, apple scab,

apple bitter rot, apple blotch, sooty blotch, cedar rust, and even powdery mildew show how bad they are in the cull pile.

"Of course, you don't have to pile your waste fruit in a cull pile to discover those diseases, "Dr. Waite explained. "The small orchardist, or the home gardener, or those of you who have a few trees in your yard can identify the diseases at picking time, or even before.

"The main thing to bear in mind is that different diseases require different treatments. Orchard disease problems focus on the cull pile. By looking over your culls, and finding out just what diseases are causing your troubles, you will be in a position to plan the proper campaign to cut down your losses next season.

"For instance, the gumming fungus and the peach leaf curl require early winter or dormant spraying. Peach brown rot and similar diseases on prunes and cherries require a special course of spraying or dusting. The blossom blight of peaches, and cherries, and prunes requires early spring spraying when these fruits are in bud, and summer spraying for the rot or the ripe fruit."

Dr. Waite kept on listing different fruit troubles and the different ways to handle them. "Peach bacteriosis," he said,"requires a very special spray, together with special orchard treatment, high culture, and good fertilization. Apple scab requires rather early spring spraying while apple bitter rot and apple blotch, which develop later in the season in the warm weather, require summer spraying with Bordeaux mixture. Apple cedar rust, however, is not satisfactorily controlled by sprays, but is very well controlled by cutting out the red cedars on which the rust causing fungus must live for about 20 months out of its two-year cycle of life."------

"-Just a minute, Doctor," I interrupted, "How can a fruit grower tell one of those diseases from others when he looks at his culls? We don't all know the different ear-marks,"

"That is just the point," agreed Dr. Waite. "Just think how unfortunate it would be for an orchardist to waste money trying to spray the fruit and foliage of his apples for cedar rust. On the other hand, if he knew exactly the trouble and its treatment, by cutting maybe only a few dozen cedar trees in the fence rows, or pastures or woods around his orchard he could keep it down entirely.

"Now peach yellows and Little Peach," he continued, "are often best identified when the fruit is ripening. They often show up in the cull pile. That whole peach yellows group of diseases, which includes the southern peach rosette and the obscure phony disease of Georgia, are controlled only by eradication. When you find your fruit attacked by those diseases, don't wait until next winter or next spring to start your campaign. Mark your trees at once and remove them by pulling out the roots as soon as you can."

"But, Doctor," I protested, "You say we should study the cull pile, and identify the diseases, so we can plan the proper treatment now."

"That's exactly the idea," Dr. Waite agreed with a smile.

"How can we identify them?" I started to ask. Then I realized it would be too big an order to ask him to list all the symptoms of all the different fruit troubles. Just then, however, he came to the rescue.

"There are many places you can get help in identifying the diseases which show in your cull pile," he said. "Your County Agent may be able to help you. Then there is the State Extension Service, or the State Experiment Station. And the United States Department of Agriculture has a number of specialists and also a number of bulletins you can consult.

"And," he added, "remember in consulting us, always bring or send specimens rather than trust to descriptions of the trouble. Just wrap up a few diseased leaves or twigs, or fruits if not too wet or decayed. Wrap them in several thicknesses of paper, pack them in a small box, cover the box with heavy wrapping paper, put your address on the package and send with your letter of inquiry.

"With most of these diseases, it is entirely satisfactory to just press a few leaves for a few days in several thicknesses of dry newspaper or blotting paper. Or peel the diseased fruits and press the peelings, and mail the dried specimens folded between sheets of paper stiffened by cardboard on each side."

I told him I would pass the word along to you, and thanked him,

"Just a moment," he said, "don't forget you can get a lot of information from printed matter. The U.S. Department of Agriculture has free bulletins on a number of fruit diseases. Among others, he suggested you might write for Farmers' Bulletin No. 1527 on "Peach Brown Rot and Scab." Farmers Bulletin No. 1479-F. on "Apple Blotch." No. 1410-F on "Control of Brown Rot of Prunes and Cherries. No. 1488-F on "Diseases of Blackberries and Raspberries; and No. 1220-F on "Insect and Fungous Enemies of the Grape.

So long, now, and thank you.

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ANNOUNCEMENT: Just to make sure that you have the facts on the bulletins you want, we repeat our reporter's list: Farmers' Bulletins 1527-F, "Peach Brown Rot and Scab;" 1479-F, "Apple Blotch"; 1410-F, "Control of Brown Rot of Prunes and Cherries"; 1488-F, "Diseases of Blackberries and Raspberries"; and 1220-F, "Insect and Fungous Enemies of the Grape." Address your requests for them to this Station or to the United States Department of Agriculture at Washington, D. C. The bulletins are free. Our Farm Reporter returns tomorrow to start his weekly series of poultry talks.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON

Tuesday, Sept. 17, 1929

(Regions 1, 2, and 4)

NOT FOR PUBLICATION

Crops and Soils Interview 1 b: Better Seed Corn.

Speaking Time: 9 Minutes.

ANNOUNCEMENT: Every week day except Saturday we have a report from our farm reporter at Washington. We instruct him to go to specialists of the United States Department of Agriculture and find out things for us. He talks face to face with the specialist and reports his answers back to you directly by radio. For instance, we told the Farm Reporter to see the corn specialist and ask him how about next year's corn crop -- how to select the seed. He is ready now to make his report ----- Here he is. Did you see that corn man? ---

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Yes, I saw Mr. F. D. Richey, in charge of the corn investigations for the United States Department of Agriculture.----- From what they tell me around the Department, Mr. Richey has worked with corn for years. He is an authority on corn breeding. He has explored for corn plants in South America. He has crossed corn in all parts of this country, seeking to develop new and improved varieties. You recall what a valuable man Dean Swift considered "whoever could make two ears of corn, or two blades of grass, to grow upon a spot of ground where only one grew before."-------- Well, I guess Mr. Richey has proved himself that sort of man.

Anyway, I told him that some of our farmers were not satisfied with their own strains of corn. Mr. Richey is a big tall man originally from the tall-corn country. He seemed to understand. He suggested that you get in touch with the County Agent or the State Experiment Station and if they know better strains, arrange now to get seed for comparing with yours in 1930.

"But, anyhow," he said, in that quiet way of his," get out enough of your own corn for next year's seed supply. It is easy to do that now ---- it may be impossible later."

"What are the best ears to select for seed?" I asked.

"The best seed corn," Mr. Richey said, "is that which has matured normally on the stalks in the field. Pick the ears as soon as they mature thoroughly; and before they are damaged by frost or by heating or molding

during warm, humid weather.

"You can get good quality seed," he added, "from ears with kernels that are only well dented, if you handle it carefully. So, if your corn is late, don't wait and just take changes of getting better seed. Select plenty of corn for seed as soon as it can be relied upon to germinate well.

"Then, if frost holds off longer and weather conditions are favorable for further development, you can select a new supply of better seed later."

Mr. Richey said that the seed corn should be selected from the stalks standing in the field. I asked him why that was necessary. And he told me that that is the only way you can tell which are the best plants. Seed corn ears should be selected from vigorous sturdy stalks that are adapted to your locality. Avoid the extra-late or the extra-early maturing plants. Seed corn from extra late-maturing corn tends to produce soft or chaffy corn. Seed from the too-early maturing plants tends to produce lower yields.

In selecting the seed ears, avoid the plants that are smutted, or plants that are prematurely dead, or plants that are leaning or broken, or any that show any other evidences of root, or stalk, or ear-rots.

"Ears that droop as they mature shed rains better and resist the attack of birds better, don't they?" I suggested.

"Yes," said Mr. Richey, "but be careful that it is a natural drooping. Stalks rots often weaken the shanks so they break. If you inspect the stalks, however, you can tell why the ears hang down.

"In the Southern States," he added, "It pays to select seed ears with long tight husks. Long tight husks help keep out the weevils, and ear worms, and birds."

Then I asked him about the type of seed ears. But he said that is not important, if the ears are of the type adapted to your locality. Rough, chaffy ears usually are late maturing, and may be diseased, however. His advice is to pick ears for seed that are a little longer and heavier than the average with sound cobs and shank attachments and with heavy, clear, bright kernels.

"How about caring for the corn after we have selected the seed ears?" I asked.

"Well, seed corn with too much moisture must be dried fast and handled carefully until it is thoroughly dry," Mr. Richey explained. "Seed corn is not safe from freezing injury until the moisture is down to 13 or 14 per cent, and ears that have just reached the dent stage may have as much as 60 per cent moisture in them. So you see, the more immature the corn is, the harder it is to dry properly. The main object is to get out the excess moisture before it freezes and to dry the grain in such a way that molds won't develop."

Ordinarily, he said, seed ears should be hung so there is a free

movement of air around each ear. Mr. Richey gave me a Farmers' Bulletin No. 1175 called "Better Seed Corn," which explains a number of different ways of handling seed corn.

If the weather is fair, he said, you usually won't need to use artificial heat. The loft of the barn with doors open at each end often supplies a drying room with a through draft in which to hang ears of seed corn so they will dry well.

But if the weather is rainy or damp, or if temperatures get below freezing, you may need artificial heat. In any case, artificial heat in connection with good ventilation dries the seed corn fast. And Mr. Richey was very careful to emphasize that "with good ventilation. He pointed out that using artificial heat without ventilation favors the development of mold on the sappy ears, and is likely to do more harm than good.

A small heater operated underneath loosely piled or suspended seed ears in a room that has openings near the top and bottom should meet nearly all the requirements for drying seed corn on the average farm, he said. However, any convenient source of heat can be used, so you are careful not to set fire to things.

The seed can be left on the ear until planting time or you can shell it off as soon as it is thoroughly dry. You can just leave the ears on the racks if there is no danger of damage by mice, or rats, or birds.

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ANNOUNCEMENT: You have just heard the Farm Reporter tell of his interview with Mr. F. D. Richey, in charge of corn investigations for the United States Department of Agriculture. That bulletin mentioned by Mr. Richey, is Farmers' Bulletin No. 1175 on Better Seed Corn. You can get it free of charge by writing to this Station _____ or by writing direct to the U. S. Dept. of Agriculture at Washington, D. C. Tomorrow the Reporter reports to Poultry raisers.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

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YOUR FARM REPORTER AT WASHINGTON Wednesday, September 18, 1929

Poultry Interview 1: IF YOU PLAN TO ENTER THE POULTRY BUSINESS

Speaking Time: 10 Minutes

ANNOUNCEMENT: Sometimes, it's a good idea to go back to the beginning and have a look at the essentials of a business. That's what your Farm Reporter at Washington has done in preparation for today's report to you from the United States Department of Agriculture. But here he is. And ready to plunge right into his story. We'll detain him no longer.

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The Department of Agriculture has been getting stacks of letters lately from people who are thinking about going into the poultry business. So the boss suggested it would be a good idea to get some information that might be helpful to newcomers in poultrying. I made a bee-line for the office of A. R. Lee, associate poultry husbandman in the Bureau of Animal Industry.

Mr. Lee has been with the Department of Agriculture for 20 years and he's been interested in poultry for considerably longer than that. In fact, he told me he'd always been interested in raising chickens. When he was going to college in New England he worked all of the time, including summers, in the college poultry department. Later on he spent several years at field work in the Middle West. And he's ALWAYS raised poultry. He was in the department when the Government Poultry Farm was established and he has planned many of the experiments conducted there. So there isn't very much that Mr. Lee doesn't know about the ins and outs of the poultry business.

"There's one thing above all others that I'd like to say to beginners in poultry raising," Mr. Lee began. "And that is, to make a success of it you have to be familiar with the details. And familiarity with details can be gained only from experience.

"That's why I always recommend that a beginning poultry raiser start in on a small scale. Of course many people don't want to start small. They'd like to step right out in a big way. But usually that doesn't work very well. Most successful poultry farms have grown up from a small beginning. You've got to build from the ground up, on a substantial foundation.

"When is a good time to go into the poultry business?" I asked.

Mr. Lee answered briefly: "Anytime. It IS more common to start in the spring. But fall is a good time, too. You can start in right now, by buying pullets or young hens. That involves more immediate expense than buying day-old chicks in the spring, but on the other hand it gives quicker returns."

He paused, so I asked another question. "What are the best breeds?"

"Well," he said, "there is no one BEST breed. That depends. It depends upon the purpose for which you're keeping poultry and upon the section of the country you're in.

"White Leghorns of course are the outstanding commercial fowl in most parts of the country. They're especially popular where white eggs bring premiums, such as the New York market and the Pacific Coast. In New England, on the other hand, brown eggs are most in demand. So Rhode Island Reds and Barred Plymouth Rocks are the most profitable breeds there.

"These three breeds--White Leghorns, Rhode Island Reds, and Barred Plymouth Rocks--are the ones that have been especially bred for egg production. You'll invariably find them leading in the egg-laying contests throughout the country."

"Personally, Mr. Lee," I remarked, "I'm even fonder of fried chicken than I am of good, fresh eggs. How do the breeds stack up as meat producers?"

Mr. Lee said that White Leghorns aren't so satisfactory for table use. They're too light. For meat purposes the heavier breeds, such as the Plymouth Rocks and Rhode Island Reds are the best. And he went on to say that if you're raising poultry in a small way, or for recreation, there are many other good breeds. Breeds that will pay profits and that will make interesting studies in breeding.

"I'd suggest," he said, "that anyone who wants to find out more about various breeds write for Farmers' Bulletin 1506. That tells about practically all popular breeds raised in the United States.

"Then," he continued without waiting for any more questions, "you'll want to know something about housing. Again, there is no BEST type for all sections. Information on plans for poultry houses can be obtained from county agents or from the State Colleges. They know local conditions. But -- there are some general principles that apply everywhere.

"For instance, speaking VERY generally, the poultry house should be planned for the comfort and health of the hens and for the convenience of the poultry raiser. It is essential that houses be on well-drained soil and that they be sheltered from prevailing winds. And here's something more specific:

"DON'T overcrowd pullets and hens. You'll get better results from a small flock properly housed than from a larger flock crowded into cramped quarters. Allow FOUR square feet of floor in the poultry house for the larger breeds, such as Plymouth Rocks. And three square feet for Leghorns and other smaller breeds."

In this connection Mr. Lee emphasized the fact that buildings should be planned right from the start with an eye to future development. The beginner, he said, had best use a long house for laying hens, with the hens confined entirely to the house or in double yards.

Also, he went on, you've got to plan additional range for growing chickens. They do best on grass range, with brooder houses about 150 square feet apart.

If you use yards, move the flock from one to another at short intervals to avoid parasite troubles. If you have range, fine and dandy. But remember that

chickens must be taken from even a big range and put on a new one every two or three years.

At this point I asked another question. I'm getting so used to asking questions that they slip off my tongue almost automatically. I asked him about the three kinds of poultry raising that my radio listeners might want to go into, Farm poultry-raising, commercial poultry farming, and back-yard poultry-ing.

"Well, let's take them up one at a time," he suggested. "First, raising poultry on the farm. There's a good opportunity on most farms to raise from 50 to 3 or 4 hundred hens. If they're given reasonable care and plenty of feed they will return an excellent profit. And here's something the beginning poultryman, or any poultryman for that matter, ought to bear in mind. It takes just so much feed and care to keep hens alive. The EXTRA care and attention are what bring in the profits."

Mr. Lee told me that many farmers nowadays are finding that it pays to buy day-old chicks rather than hatch from their own flock. That way they can get chicks earlier and they can get them from selected stock. Its a good method of improving the quality of your flock.

Disease is a real problem on many farms. Poultry is usually allowed free range on the farm. But even with free range it is a problem to keep the land around the poultry house CLEAN. The question is SO important that I'm going to get information for a whole talk on it sometime soon. In the meantime you might write for Farmers' Bulletin 1524 on "Farm Poultry Raising." That's a good bulletin to have, anyway.

Now about commercial poultry-raising, which is mainly concerned with producing eggs for market. Production of meat is a side issue here. Mr. Lee said that it is possible to establish a commercial farm in any part of the United States. Provided--and this is the important point--that it is near enough to a large city where a local market can be built up for high-class eggs. Right now the business is most highly specialized in the northeastern states where there are big-city markets, and along the Pacific coast where climatic conditions are very favorable and where cooperative egg-marketing is well developed.

And now-poultry raising in the back yard. It's much more important than it sounds. Mr. Lee pointed out that back-yard poultrying offers a constant means of income and that it provides strictly fresh eggs for every day and table poultry for Sunday dinners. And, if you're interested in breeding and handling poultry, it furnished excellent recreation.

The back-yard poultry keeper of course doesn't have room to raise poultry to advantage. Mr. Lee suggests that it will usually be best to buy pullets either partly developed or all ready to lay. The best results with hens, he said, are usually secured by keeping them confined to comfortable houses, or by using alternate yards. And the yards must be changed several times during the season to keep the soil free from parasites.

Mr. Lee, by the way, has written a Farmers' Bulletin especially for back-yard poultry keepers. The number is 1508.

Then, as a final question I asked Mr. Lee this: "If a beginning poultryman were to ask you for the most timely suggestions on entering the business right now, what would you tell him?"

That took a little study. But Mr. Lee didn't hesitate when he had decided what he wanted to say. That's characteristic of him. Here is his reply:

"I'd tell him that the first thing is to get suitable quarters and to have these quarters ready for winter. Then, to get well-grown pullets ready to lay by the first of October. And finally, that these pullets should be good quality stock, free from disease and especially bred for egg production."

Sometime this week I'm going to interview Mr. Lee again. On culling the poultry flock. I'll tell you about it next Wednesday at this time.

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ANNOUNCEMENT: If you want that bulletin on backyard poultry raising, here's the number again: Farmers' Bulletin 1508-F. Direct your requests to the Farm Reporter at this station, or at the United States Department of Agriculture in Washington, D. C. Tomorrow he begins for you a series of reports on the development and problems of farm cooperatives, obtained from the men in the Department of Agriculture and over governmental establishments at the nation's capital.

UNITED STATES DEPARTMENT OF AGRICULTURE
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YOUR FARM REPORTER AT WASHINGTON Thur. Sept. 19, 1929.

NOT FOR PUBLICATION

Cooperation Interview 1: TRENDS IN COOPERATIVE MARKETING

Speaking Time: 9 Minutes

ANNOUNCEMENT: In the foreground of the agricultural picture right now are the farm cooperatives of America. The new Federal Farm Board is working with and through them at the task of stabilizing American agriculture. So we've assigned your Farm Reporter, the radio representative of Station_____ and the United States Department of Agriculture to bring you new facts from this broad field each Thursday in his 10-minute period. He begins today with a review of trends in cooperative marketing. Ladies and gentlemen, Your Farm Reporter.

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I've been wondering just what was happening in cooperative marketing. From what I've been hearing, the co-op movement is moving right along. For that reason, I was glad to get orders to find out just what was stirring.

I went right to Mr. A. W. McKay. Mr. McKay, you know, is now in charge of the Division of Cooperative Marketing in the U.S. Department of Agriculture, and that is the Division which keeps track of the work of co-op associations from one end of this country to the other; besides making studies of what farmers are doing in the way of getting together in selling and buying in other countries.

"What are the tendencies in cooperative marketing by farmers these days, Mr. McKay?" I asked. Of course, you understand, I realized that farmers' co-ops are of all kinds and sizes; but I knew Mr. McKay could give me a general picture of what kinds seem to be winning out and what is new in marketing.

"Farmers' co-ops are progressing from small to large-scale business concerns," said Mr. McKay. "Thirty or forty years ago, farmers' associations were practically all local organizations. Then about ten years ago, the cooperative movement took on new life and the big federations and centralized state-wide co-ops came into the picture.

"The federations," he went on to explain, "combined local associations into a central selling organization. The member associations were locally controlled, however. On the other hand, the centralized type of state-wide co-op managed everything from one headquarters. Now, however, the centralized co-ops have come to realize the importance of local control and

local contacts, and the tendency is to return to a greater measure of local control.

"The most striking development in the last two or three years has been the consolidation and cooperation of farmers' Co-ops. There has been a marked tendency for related groups of co-ops to get together.

"A National Cooperative Milk Producers Federation has been formed to look after the common interests of fluid milk, and butter, and cheese organizations. The various wool groups have joined forces in a national wool association, while the various livestock marketing agencies have formed a national livestock association.

"And not only have the related groups tended to pool their efforts for common aims, but this last year, there has been formed a cooperative association of co-operative associations called the National Co-operative Council."

The National Cooperative Council, Mr. McKay explained, is a conference board to take care of the problems common to all cooperatives and represent the common interest of all the farmers' association in education, publicity, legislation and the like.

"And now the Federal Farm Board," Mr. McKay said, "has stepped into the picture and pointed the way to the necessity of further consolidation of scattered, but closely related interests."

"Besides that tendency of smaller co-ops to gather into big ones, have there been any changes in the work done by these farmers' organization?" I asked.

"Yes," said Mr. McKay, "there is a tendency, for example, for the fruit associations to do the grading and packing at central plants. That is, of course, most noticeable in those fruits and vegetables which are hardest for the individual member farmer to handle on the farm. Even in the case of such products as potatoes, however, central warehouses operated by the association are being used.

"With most farmers' marketing associations cooperative buying is a minor phase of their work. However, cooperative buying is developing quite rapidly. The total purchases by farmers' cooperatives are estimated at $300,000,000 out of a total business of $2,500,000,000. Farmers elevators and creameries and other local associations, buy fertilizers and fencing, and binder twine, and coal, and feed, and supplies of that kind for their members.

"In the East, particularly in the Dairy section, large specialized purchasing organizations buy dairy feed, and seeds, and fertilizers for their members. One such organization last year did a business of about $21,000,000. In the West buying organizations, such as the Fruit Growers' Supply Company, which is a branch of a large fruit marketing co-op, buy

packing supplies.

The Fruit Growers Supply Company manufactures the material used to make the boxes in which the fruit is packed and buys paper wraps, nails and other supplies in large quantities for local packing houses. It owns and leases several thousand acres of timberland and runs its own sawmills.

Still more recently, cooperative oil and gas stations have spread fast through the middle West. These concerns buy gasoline, kerosene, and grease for tractors and trucks of their members. For the most part, their service consists in delivering by tanks to the farm, but a few operate retail filling stations.

The old idea that a farmers' cooperative association by controlling all or part of a certain product can fix an arbitrary price and control the market has now practically disappeared, Mr. McKay pointed out. The co-ops still recognize, however, that there are advantages in handling a large volume of a commodity and in having a big membership. Such a healthy-sized organization is more economical to operate.

The relations of the association to its members are also tending to improve. At first, when coeops were almost entirely local, membership was on an informal basis. But with the coming of the big central co-ops, the iron-clad contract was developed to prevent the member selling outside the association. Although such contracts proved legally enforceable, as a practical matter they were found to be rather a hindrance to the success of the association and now the tendency is back toward a more liberal contract relationship between the member and the organization, making it easier for the member to withdraw if he wants to.

"Good management is essential," said Mr. McKay emphatically.

The present day cooperative movement's success," he went on, "depends on the ability of farmers to develop the leadership necessary to carry on. As the cooperative movement expands, it makes bigger demands on the intelligence of the association members. They must understand the possibilities and the limitations, of cooperative marketing.

"There is a growing tendency to emphasize cooperation in the common schools, in the high schools and also in schools and conferences of adult farmers. Universities are now offering courses in cooperative marketing and management. Such education is helping to provide the needed training for management which is essential to the continued success of farmers' cooperative concerns."

So there's your review of the trends in cooperative marketing as they look to the man who is in touch with the work in all lines -- Mr. A. W. McKay, in charge of the cooperative marketing division in the Federal Bureau of Agricultural Economics.

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ANNOUNCEMENT: Tomorrow Your Farm Reporter will be on deck at the usual time with facts on the dairy business. He appeals again for your help in making this program most useful to everybody. If you want information on agricultural matters of general interest why not suggest to him an interview with men of the United States Department of Agriculture which will be valuable for his daily reports to rural America?

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UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Friday, September 20, 1929

NOT FOR PUBLICATION

SPEAKING TIME: 10 Minutes.

Dairy Interview No. 1: MAKING A START IN THE DAIRY BUSINESS

ANNOUNCEMENT: Concluding his first week's series of chats for you with agricultural authorities of the United States Department of Agriculture your Farm reporter in Washington today gives you a summary of an interesting conversation he has had with one of the dairy husbandmen in the Federal Department. Here is your reporter, Ladies and Gentlemen:

--ooOoo--

You've probably heard the story about the good old Southern darky who was asked what his occupation was. "Well, sah," the old fellow explained, "I jest sets and thinks. And mostly I jest sets."

The story popped into my mind the other day while I was talking with U.B. Shepherd, associate diary husbandman for the Department of Agriculture. It occurred to me, from what Mr. Shepherd was saying about starting out in dairying, that one of the most important things to do BEFORE starting is "to jest set and think" a while. There are a lot of questions to think about.

Mr. Shepherd DID say that there IS an opportunity for more people to go into dairying. That is, without causing any overproduction. Providing, of course, there is no GENERAL increase. There is a safety valve, you see, in the fact that, while some people are going in, others are going out.

But you're interested in what YOU can do in dairying. Well, that depends upon many things that aren't connected with the general situation. And Mr. Shepherd, speaking from his own long experience in the business, suggests that these are the things that ought to be thought out thoroughly.

First, of course, you'll want to be pretty sure that you will find dairying profitable. Meaning, will it pay you to change from your present occupation, or from your present type of farming?

Do you think you'll enjoy dairying? Are you fitted for it? A good dairyman, you know, almost has to be what psychologists would call dairy-minded. Many very successful farmers haven't succeeded in dairying because they WEREN'T dairy-minded. One point to remember in this connection is that dairying is a 365-day a year job. As you know, dairy cows observe neither Sundays nor holidays.

Then, here's another question. Is your present location adapted to dairy farming? And, finally, right along this line, comes the most important question of all. Will you have a suitable market and a good demand for your dairy products? There's no use starting unless you DO have a good market.

Naturally I inquired particularly about markets. Mr. Shepherd sketched for me a brief outline of the market possibilities.

"First," he began,"there is market milk. It usually pays higher cash returns than any other product. But, of course, there are more expenses connected with it. And it takes more equipment and more capital to start.

"Then, there are creameries, cheese factories and condensaries. So far as cash returns are concerned there's little difference in them. Cheese factories and condensaries want sweet, whole milk. And creameries want sweet and sour cream. The cost of marketing is slightly less in selling to creameries. There isn't such a large bulk to haul, and you don't have to deliver quite so often.

"Condensaries," he continued, "usually pay a little higher than creameries and cheese factories. But the creameries and cheese factories offer another advantage that ordinarily makes up for the difference in price. If you sell to a creamery you have skimmilk left. And skimmilk is an excellent feed for calves, pigs and chickens. Then, from the cheese factory you can haul back the whey made from your milk. Whey isn't quite so good as skimmilk for feed, but it IS good. It is fed mostly to hogs, but sometimes to calves and poultry.

"Now," Mr. Shepherd went on, "I suppose you want to know something about location and buildings and so forth. If it were 20 years ago and I were just going into dairying, I know that I'd be making inquiries along this line.

"Well, in the first place, the dairy farm ought to be fertile, and it must furnish an abundant supply of pure water. And, of course, it should be convenient to markets.

"Another thing. The dairy herd, you know, takes lots of feed. And it is best and cheapest to raise most of this feed on the farm. So the farm has to be large enough to take care of your herd. In most cases, also, it is a good plan to raise a cash crop or two along with the hay and feed grains."

Mr. Shepherd paused for only a moment— not even long enough for me to frame a question. "Now about the amount of capital necessary. If you were a beginning dairyman looking for information I'd ask you these two questions. Do you have money available? And, how much can you stand to go in debt? The recommendation I'd make is that it isn't wise to go too deeply into debt. Make each dollar go just as far as it can in buildings, equipment and foundation herd.

"Buildings needn't be expensive. The idea is to have them well constructed and convenient. And, by the way, when you're planning buildings, plan them so that if you want to increase the herd later on you can do it without changing the whole arrangement.

"What buildings does the dairyman need? Well, I'd say that the essential ones are a dairy barn, a milk house, a silo, a manure pit, and an ice-house. All dairymen don't have silos. But the silo is SO desirable that it may almost be considered a necessity."

You'll pardon me if I interrupt Mr. Shepherd a moment here to say something on my own hook. The Department of Agriculture has published two bulletins on dairy farm buildings that you may want to send for. One of them is "Dairy Barn

Construction," Farmers' Bulletin No. 1342. The other is Farmers' Bulletin No. 1214, "Farm Dairy Houses."

Now we're about ready to establish our herd. "What kind of dairy cows would you buy?" I asked Mr. Shepherd.

He gazed intently at the ceiling for a moment. Then-- "Well, that depends upon how much money you have. I'd say that usually it's best to start with a SMALL herd of healthy, high-producing grade cows of good conformation. From time to time, then, you can add purebred females as your finances permit.

"In selecting the breed for your foundation herd the choice will depend on several things. For instance, the breed of cow most general in your community, personal preferences, and the kind of markets you have.

"There are several things to be guarded against, too, in buying cows. Take care that you don't get shy breeders, or cows with diseased udders. And, of course, you want to be sure that you aren't bringing in such diseases as tuberculosis and contagious abortion."

"How about the age of the cows?" I inquired.

"That's a good point," he agreed. "Cows three to five years old probably will give larger immediate returns than any others. Sometimes,though, it may be desirable to buy bred heifers. Or even older cows provided they are good breeding animals. And provided they can be bought cheap."

That takes care of half the herd. Now we come to the other half. The bull. Mr. Shepherd pointed out that the bull really is half the herd, since the future herd production depends upon the sire.

He recommended that the bull should, first of all, be a purebred of good conformation. And he emphasized this: Get a proved sire if possible. A bull that has been proved, through the records of his offspring, will cost more. But he's usually worth far more than the extra cost.

However, there's often a difficulty here. Proved sires are becoming more numerous but they're still pretty scarce. The next best buy, Mr. Shepherd suggested, is a young bull out of a dam sired by a proved bull.

The last, but by no means the least important, part of dairying that Mr. Shepherd stressed was management. The important points here are proper feeding and care. They are really the deciding factors in determining net profits.

"And," Mr. Shepherd pointed out, "in order to feed and care for dairy cows properly it is necessary to keep records--accurate records. Records tell you how much your cows are producing. Then you can feed each one according to the amount she produces. That way you get the maximum production from each cow and, also, you won't waste any feed on low producers. And then, knowing the production of each cow, you can get rid of the ones that aren't paying for their board.

"High producers, of course, are the ones that pay profits. We've found that it takes only about 50 per cent more feed for a cow that produces 400 pounds of butterfat a year than for one producing only 200 pounds. On an average, cows

producing slightly over a hundred pounds have returned a profit of about $14; cows producing slightly over 200 pounds, $54, and 400-pound producers $138."

I'd like to say more about feeding and management, Mr. Shepherd specializes in that phase of dairying. And he's been with the Department of Agriculture 12 years, so he has a lot of good information on it. But I'll have to tell you about it later. My time is up. In the meantime you might be interested in three leaflets that Mr. Shepherd himself has prepared. Leaflet No. 10, "Care of the Cow at Calving Time;" Leaflet No. 14, "Raising the Dairy Heifer;" and Leaflet No. 20, "Care of the Dairy Calf."

--ooOoo--

CLOSING ANNOUNCEMENT: And that winds up the first week of reports from the National capital to the audience of Station_____ by your farm reporter. May we remind you that his mission is simply to serve you in any possible way? Do you want the facts on any angle of farming? Then write your question to the Farm Reporter in care of Station_____ or to the United States Department of Agriculture at Washington, D. C. He will do his level best to dig them up for you and while you are about it, why not tell him where he can improve his talks, or how you like them and why. We want this program to be of the utmost possible use to every one of you in our rural audience. On Monday next the Farm Reporter returns to the microphone with another budget of facts, this time on livestock problems.

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UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Monday, Sept. 23, 1929

Livestock Interview 2: SOURCES OF OUR BEEF SUPPLY

Speaking Time: 10 Minutes

ANNOUNCEMENT: Last Monday Your Farm Reporter at Washington told you some of the facts on a fundamental livestock subject -- heredity. For today we assigned him to ferret out the statistics on sources of our beef supply. Here comes the Farm Reporter with a great sheaf of notes, but if he gets too statistical for you, tune out today and write us. We'll see that he doesn't figure you out again. All right, Mr. Reporter.

---ooOoo---

It's a tough assignment to eliminate figures from a story about the economics of any industry, agricultural or otherwise. When I started on this assignment for today, I ran smack into one of the most extensive supplies of statistics it ever has been my dismay to tackle.

That was in the office of Mr. C. L. Harlan, the chief livestock statistician for the Bureau of Agricultural Economics. I put the question up to this Iowan, who has been producing not tall corn, but tall columns --or figures -- in Washington for the past eight years. "Mr. Harlan," I said, "Where does our beef supply come from?"

"All the facts are right there in that stack of tabulation sheets," said Harlan. "Help yourself." And he pointed to a pile of billboard-size sheets lined with rows of figures like picket fences.

I felt like an old German neighbor of ours. This neighbor used to brag about the cooking ability of his wife. "'Y know," he told my Dad once, "I shot a crow this morning, and Matilda cooked it, and you couldn't tell the difference."

Neither could I tell the difference between the beef output of different sections from THAT bunch of blanket-sized ledger sheets.

So I put it up to Mr. Harlan to extract the facts from the figures. He agreed to help me out. So..... "Now, what sections send the calves that make the veal to market and how many do they send?" I asked.

"Last year about six million calves went to the block," he replied. "And they came from, first, Texas. Lots of room in that State, and they use a good part of it to grow calves. Then, the dairy States sent a good many calves to the American dinner table via the packing plant. Wisconsin stood second in the business of supplying slaughter calves, Iowa, third, Minnesota, fourth, and New York, fifth. Of course, there is a little local calf supply in all sections."

"How about finished cattle?" was my next query.

"Iowa leads," Mr. Harlan answered promptly, just a glint of pride apparent in his eye. "Iowa has an abundance of finishing feed, and she is close to the big meat-packing centers, like Chicago and Omaha."

The statistician called my attention to a map on the wall, showing the distribution of beef production. "Look there," he said, "that shows you that the bulk of our beef is produced in two sections. One is Texas and the other Range States, and the other is the Corn Belt States. Texas leads in numbers of beef cattle. But a large proportion of the cattle from the Lone Star State and from other Range areas is shipped into corn belt feed lots for finishing. It is easy and cheap to start calves in the West, finish them in the corn States; than to ship the feed to the cattle, on the range.

"Hence, more than half of our annual beef supply comes from the Corn Belt States. Fifty-five per cent, to be exact, in the average year."

"Now how about the rest of the beef supply, "I cut in. "Does it come mostly from outside the United States?"

"Hardly," he answered. During the year ended June 30, 1929, imports of live cattle and calves -- mostly from Canada and Mexico -- amounted to about 4 and one-half per cent of the total federally inspected slaughter of cattle and calves during that year. But you must remember that most of the imported live cattle and calves were brought in as feeders for our feed lots. We also imported a little more than one pound in every hundred of our fresh beef and veal supply."

I made one of my lightning mental calculations.

"So that leaves about 40 per cent of our beef supply coming from other than the North Central States?" I said it doubtfully, though.

"Pretty good guess," he conceded.

Which makes it apparent that the beef cattle industry is an important farm business in nearly every section, even though it is most concentrated in the Corn Belt.

And it is just like all other agricultural businesses. The competition is of the keenest. Every producer is pitted against every other producer, in the open market. Every other producer not only of this country, but of adjacent countries.

This competition makes it necessary to have the fullest possible information on prospective supplies and demand for beef cattle to figure out cattle breeding and feeding operations in advance.

I have gone a little bit further than my assignment, for today, and have consulted Mr. C. V. Whalin, the man in charge of the livestock, meats,

and wool division of the Bureau of Agricultural Economics, on the outlook for beef cattle producers this Winter. When I saw him, Mr. Whalin had just completed, along with other men of the Bureau, the statement of the beef cattle outlook. This veteran of the Federal service -- Mr. Whalin has served as meat inspector and marketing specialist for a quarter of a century and more -- obligingly boiled down the committee's statement for me in these words:

"Marketing of cattle from the western range States this fall may be slightly smaller than a year ago. Remember, though, that in some Range areas general conditions are the worst since the drought of 1919. In such areas some forced marketings of cattle undoubtedly will occur. Hence total market supplies may be a little changed from a year ago.

"Corn prospects are uncertain. Information available last month indicated that Corn Belt feeders would not take out any more cattle this fall than last. Hence, cattle slaughter this fall may be greater than a year ago. Calf slaughter, however, probably will be less.

"It doesn't appear that cattlemen will have to worry about competition from foreign countries during the next year at least. Even though we expect imports of beef cattle and beef during the next 12 months to be greater than the average of the past two years, they will represent only a small part of our total beef supply.

"The demand for beef is expected to remain practically unchanged during the remainder of 1929. Consumer purchasing power is high, and it seems probably that relatively high prices for other meats will continue. That means that demand for beef will keep on as in the first part of the year.

"The cattle price outlook appears favorable. Of course, there will be the customary seasonal variations, but unless supply and demand conditions take a totally unexpected course, prices should continue at about the 1928-29 level for the next twelve months.

"Summing up, then, No material change in supplies, demand, or prices of slaughter cattle are expected during the next 6 to 12 months."

"But after that?" I queried.

"Well," Mr. Walin said, after some reflection, "there seems to be some tendency toward expanding the numbers of beef cattle. If this continues, it will probably result in heavier slaughter in 1931 and 1932.

"And remember, too, that the increase in numbers seems to be taking place in the principal cattle states of the Corn Belt area rather than in the Range States. Furthermore, there is every indication that the expansion will be orderly. If so, we needn't expect a repetition of the abnormal increases which occurred between 1912 and 1918.

"So producers should watch carefully the growth in population, the changes in preference of consumers, and the per capita consumption of beef and try to keep production adjusted to demand."

That ended my session with the livestock economists. It was interesting to me. I hope I've culled out some facts of interest to you.

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ANNOUNCEMENT: Your Farm Reporter has just told you the story of his interviews with livestock economists on Sources of the Beef Supply. Should you wish further information on this subject, send him your questions either in care of this station or of the United States Department of Agriculture at Washington, D. C., which cooperates with us in these daily programs. Tomorrow your Reporter details news from your federal scientists working on problems of control of diseases of wheat and small grains.

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UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Tuesday, September 24, 1929

NOT FOR PUBLICATION
(REGION 3.)

CROPS AND SOILS INTERVIEW 2: Smut Smiting Pays

SPEAKING TIME: 9 Minutes.

ANNOUNCEMENT: Roving the United States Department of Agriculture at Washington, your Farm Reporter has come upon facts important to all growers of wheat. Today he tells you about his interview with some of the plant disease fighters who are active in the campaign against a potent enemy of farm prosperity. What can you tell us, Farm Reporter?

--ooOoo--

I am going to tell you a smutty story now. I got it from the smut experts of the United States Department of Agriculture. But it is not as smutty as some I've heard.

I went to Dr. F. V. Tapke, who is a specialist in the smut diseases of grains. Luckily, I found Mr. F. C. Meier was with him. Mr. Meier has also done considerable smut fighting.

"Gentlemen," I said, "I've been sent here to ask you about how the smut situation is coming along."

"We've got to keep up the fight," replied Dr. Tapke. "Reports from this year's harvest show that smut is still with us. It is causing unnecessary losses in the form of reduced yields and market discounts."

"Is that so," I said, sort of surprised. "I understood smut wasn't so bad in some sections this year."

"That's true," agreed Dr. Tapke, "in some sections. In other sections, there has been an increase in the number of cars which have graded smutty. One thing is plain, careful seed treatment to prevent smut is good farm practice.

"Many farmers in Maryland, and Delaware, and Pennsylvania," Dr. Tapke pointed out, "now practice seed treatment. And from the reports this year, it looks like treatment is bearing fruit. Up to the middle of August, receipts of red winter wheat in Philadelphia showed about ten per cent of the cars grading smutty as compared with 40 per cent during that same period last year. Toledo reported 2 per cent of the receipts as smutty. That is a little bigger percentage than last year, but the smut is reported as lighter than last year. Wheat grown in Ohio has shown steady improvement in the matter of smut from year to year. This year's Ohio crop seems to contain very little smut.

"Receipts since July 1 at Kansas City and Denver," Dr. Tapke continued, "show more cars grading smutty than last year. At Kansas City, 12 per cent of the cars inspected during the last two months have graded smutty. At Omaha, 26 per cent graded smutty -- that's about the same amount as last year -- Denver, however, reported 37 per cent of the cars smutty."

"That's pretty high, isn't it?" I remarked.

"Yes," said Dr. Tapke, "but this season the degree of smut in individual shipments is lighter than last year. We are making progress," he continued," "but the figures show that it will pay farmers to redouble their efforts to apply careful seed treatment."

Then he went on to explain that the percentage of wheat grading smutty is not the only loss. Sections shipping smutty wheat are sure to have had big losses in the field, in the form of lower yields.

As you know, you can't be certain wheat is smutted until it has headed. But often there are some pretty dependable signs. The wheat plants may be more or less stunted and have a bluish-green color, a little darker than normal. After heading the heads may also look bluish-green, and they are generally wider. The smut balls that take the place of the wheat kernels may develop enough to spread the chaff apart.

After the crop is mature, however, the smutted heads look darker than normal due to the masses of almost black smut spores which make up most of those smut balls. When you break open those smut balls you get that spoiled fish smell that some of you know all too well.

Of course, during harvesting and threshing a lot of those smut balls are broken. The smut spores get mixed with the sound wheat. If that wheat is used for seed and sown without being treated--- well, that is just too bad! The smut spores germinate as the wheat germinates. The little germ tubes produced by the smut spore enter the young wheat plant. As the wheat plants grow, the threads from the smut germ tubes spread through the tender tissues. Finally they get to the head of the wheat. In the wheat heads, they produce more spores in more of those smut balls which take the place of the wheat kernels.

The way to prevent that happening in your wheat, according to Dr. Tapke and Mr. Meier, is to treat the seed wheat with copper-carbonate.

I asked them how about growing smut-resistant varieties of wheat, and other ways of keeping down smut. Dr. Takpe said that the development of resistant wheat has a lot of promise. As yet, however, he insisted, that phase of stinking smut control is in the experimental stage, so growers must rely on seed treatment. Treatment with copper-carbonate is best for wheat. But for the smut of oats, the formaldehyde treatment is cheap, easy to apply, and very effective.

In the last few years, Mr. Meier told me, oat smut has been taking a toll of about 50,000,000 bushels of oats a year. The figures for the last two seasons are not all in yet, but enough are in to show that oat smut is still causing tremendous losses and many farmers are not treating their seed oats as they should to save themselves such losses.

As Mr. Meier pointed out, the formaldehyde treatment can be used as a spray or a sprinkle or a dip. Anyway, it just takes one pint of formaldehyde to treat 50 bushels of oats. The difference is only in the amount of water and the way you apply the solution.

When using the spray method you add a pint of formaldehyde to a pint of water and spray the quart of solution on the oats as they are shoveled over. Then you shovel the seed in a pile and cover with blankets or canvas. Just keep the pile covered overnight and sow the next day.

In using the sprinkle method, you add the pint of formaldehyde to 40 gallons of water and sprinkle the solution on with a sprinkling can as the oats are shoveled over. You keep the pile covered overnight and sow the next day, the same as with the spray method.

In some States a pint of formaldehyde is added to only 5 or 10 gallons of water, and applied the same way.

In case of the dip method, you put the seed in a loosely-woven burlap sack, half filled and tied at the top, and dip the sacks in a solution of one pint of formaldehyde to 40 gallons of water. You dip the sacks two or three times and let them drain after each dip and then take them out and let them drain and dry overnight. When you can't sow them the next day, better spread them out and air them.

But the United States Department of Agriculture has a free set of instructions on "Formaldehyde Seed Treatment for Oat Smuts." Write and ask for Miscellaneous Publication No. 21.

And if you want information on "The Smuts of Wheat and Rye and their Control" just ask for Farmers' Bulletin No. 1540-F. And if you want to know hot to make a good home-made mixer for treating wheat with copper carbonate, ask for Miscellaneous Circular No. 108. Circular No. 108 is called "Copper-Carbonate Seed Treatment for Stinking Smut of Wheat."

---ooOoo---

ANNOUNCEMENT: Just to make sure you have them, I'll repeat the numbers and titles of those bulletins. Ready? All right, Miscellaneous Publication 21, "Seed Treatment for Oat Smuts;" Farmers' Bulletin 1540-F, "Smuts of Wheat and Rye and Their Control;" and Miscellaneous Circular 108-M, "Copper-Carbonate Seed Treatment for Stinking Smut of Wheat." Address your request to the Farm Reporter at this station, or at the United States Department of Agriculture, Washington, D. C. Your comments and suggestions likewise will be welcomed. Tomorrow, the Reporter sums up new facts on poultry growing for you.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Wednesday, September 25, 1929

NOT FOR PUBLICATION

Speaking Time: 9 minutes

Poultry Interview No. 2: CULLING THE POULTRY FLOCK

ANNOUNCEMENT: Last week, you'll remember, YOUR FARM REPORTER introduced ~~you~~ to A.R. Lee, Department of Agriculture poultry husbandman. Well, today he continues the acquaintanceship with another interview. We ought to be pretty well acquainted with Mr. Lee before long. The subject this time is "Culling the Poultry Flock." Here's YOUR FARM REPORTER now to tell you what Mr. Lee has to say about this very important subject.

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Do you know of any boarding-house that keeps boarders who can't pay for their meals? Well, neither do I.

But I do know of poultry raisers who feed hens and pullets that can't pay for their board. And I know of others who keep fowls that just barely DO pay their expenses.

Mr. Lee gave me some figures on this. He told me that the average egg production from most farm flocks is probably less than 100 eggs a year. That usually isn't enough to pay a profit. Generally, you know, a flock has to average at least 10 dozen eggs a year to be profitable.

We can't, of course, compare a government poultry farm with an ordinary farm. But just to show you what CAN be done, I want to tell you about the Department of Agriculture's system. The Department keeps in its flocks only the Leghorn hens that laid 225 or more eggs in a year. And Rhode Island Reds and Barred Plymouth Rocks must lay at least 200 eggs to save themselves from being made into Sunday dinners. That's a pretty high average. It's an average that isn't practicable on most poultry farms. But it DOES show what careful breeding and selection, or culling, will do. And it indicates that that 100-egg average can be made considerably higher without a great deal of trouble.

Mr. Lee declared that careful culling, which means weeding out the low egg-producers, is the quickest means of increasing egg production and egg profits. And culling not only cuts down the feed bill, but it leaves a breeding flock that will produce higher-producing offspring.

I inquired about the best TIME to cull.

"Well," Mr. Lee suggested," you might remind your radio friends that right now is the time for the FINAL culling of the flock. Of course SOME culling should be done during the summer, from July on. Good culling is a

sort of continuous proposition. It runs right through the summer into the fall.

"And now," he went on," I know you're going to ask me how CLOSELY to cull the flock. Well, that depends. It depends, for one thing, on the amount of house space you have available. And, for another, upon the number of pullets you have to replace your hens. And right here, I'd like to emphasize this: It doesn't pay to crowd hens. It's always better to cull the flock very closely rather than to take any chances on overcrowding.

"It's safe to say, isn't it" I ventured, "that many poultry raisers don't cull closely ENOUGH?"

Mr. Lee nodded. "I think that's a very safe statement. In fact, I'd be inclined to say that MOST poultry raisers could increase their profits through closer culling. That is, by getting rid of the layers that are just on the borderline, and those that return only small profits, as well as the 'star' boarders.

"Many farm flocks contain hens which are too old. It hardly ever pays to keep hens for egg production over two laying years. And the flock should be culled carefully at the end of the FIRST laying year.

"As to pullets, those that are small, weak and unthrifty had better be culled immediately. Don't put them in with the laying flock. They won't lay until midwinter anyway. And besides, they are the hens of low vitality which easily catch cold or become sickly and often spread disease in the entire flock.

"There's another important point about pullets this fall, too. Be sure to mark them, either by toe-punching or by wing bands. Then you'll know how old they are when you start culling next summer."

At this point the telephone interrupted Mr. Lee. And while he was talking with a poultry farmer over in Maryland I got a question all ready for him. "How about the actual process of culling out the low producers. How do you know which ones are profitable and which aren't?

Mr. Lee pushed back the telephone. "I was coming to that. But first I want to point out one precaution. Egg production, you know, is affected by management, especially by feeding and by parasites. So before you start culling you want to be sure that the feeding is good and that your fowls are free from parasites. It may not be the hen's fault, you see, that she isn't laying as she should.

"Now, how can you tell a good producer from a poor one? Well, there are a number of signs that we go by.

"Let's take the poor producer first. One sign of low production is a hard, dry vent. You'll also find that the pubic, or pelvic bones are close together. The comb is usually dry and shrunken. Shanks, beak and skin are commonly yellow in color.

"But perhaps the most important point of all is time of molting. The early molter is almost invariably a poor producer. If you have a hen that stopped laying and molted in July or August, you can be pretty sure that she doesn't lay many eggs during the year.

"The good producer, on the other hand, usually has a large, moist vent-well-spread and pliable pubic bones--shanks or beak that are white or faded in color--abundant abdominal capacity--a bright-red comb, bright eyes, and a head that shows vigor and health. And she is a late molter. If a hen hasn't started to molt by September 1 you can ordinarily count on her to be a good layer."

"And then, after you've culled your flock, what do you do," I asked.

Mr. Lee smiled. "After that, you sell the culled poultry as soon as possible. Culls always should be marketed at once, because they consume just as much feed afterward as before. And, by the way. The term culls is misleading in one respect. Low egg producers, you understand, may be just as good market poultry as high producers. They may often be better. So they are culls only so far as egg production is concerned. Their market value isn't affected.

"Another thing that a good many farmers' wives are doing now is canning the meat of culled birds. Right now, you know, the prices for market poultry are low. And canned chicken will make mighty good eating next winter."

Just a word also, about cocks and cockerels. Cock birds not wanted as breeders should be marketed just as soon as the hatching season is over. And all cockerels, except those selected for breeding purposes, should be eaten, canned, or sold as soon as they are large enough. Otherwise you're going to waste a lot of feed on them.

"As a final suggestion, I'd recommend to anyone who wants to cull his flock fairly close that he see a county agent or a poultryman who has had considerable experience. Taking out the lowest producers is easy. But CLOSE culling does require some study. More detailed information can also be secured in Farmers' Bulletin No. 1524, "Farm Poultry Raising."

ANNOUNCEMENT: You have just heard YOUR FARM REPORTER tell of his interview with Mr. A.R. Lee on "Culling the Poultry Flock." The bulletin Mr. Lee mentioned is Farmers' Bulletin No. 1524. You can write for it in care of this station, or direct to the United States Department of Agriculture. And don't forget! Next week at this same time the REPORTER will again be back with some more information for poultry raisers.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Thursday, September 26, 1929

NOT FOR PUBLICATION

SPEAKING TIME: 9 Minutes.

Cooperative Interview No. 2: Some Cooperative History

ANNOUNCEMENT: Already again for the second interview of developments in cooperative marketing as obtained by your Farm Reporter at Washington, D. C., from the men of the United States Department of Agriculture who are studying and assisting in the growth of farm cooperatives. All right, Mr. Reporter, what can you tell us about what's going to happen to the local cooperative?

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Dr. J. F. Booth, of the United States Department of Agriculture, has given some study to the cooperative marketing movement in the United States and Canada. When I found that out, I knew he was the man to tell us just what has been happening.

He had the figures, all right. I found him with his desk covered with graphs and charts and statistics.

"Why is it, Doctor," I asked him, "we are hearing so much these days about making big co-ops out of little ones. Why the bigger ones?"

"Changed conditions demand big cooperatives," Dr. Booth said.

"What is going to become of our local associations?" I wanted to know.

"Oh, don't worry about that," replied Dr. Booth. "There is no evidence that the local is going to pass out of the picture. Locals will always be necessary. In spite of the fact that organizations are becoming larger they are becoming stronger locally. The local and the central organization representing the combination of locals will each continue to do what each can do to best advantage."

"What part will the local do and what part the central organization?" I asked.

"Of course," explained the Doctor, "that differs with different commodities. Taken by and large, the locals tend to assembling of the commodity, and the grading to a certain extent; and they maintain the local relations with the members and distribute the returns. Contact has to be made with the farmers through the local associations, and control is usually maintained by the growers through the local agency.

"On the other hand," he continued, "the central association may carry on the grading, and see that the quality of butter, or fruit, or what not, from the

different locals is the same, so that the central organization can establish brands and trade-marks and advertise in a way which the individual local could not do by itself. Then the central organization does the actual selling. It has much more bargaining power than the member associations could have separately."

"But why all this grading and advertising of farm stuff?" I wanted to know. "We didn't used to think that necessary."

"Changed conditions," answered Dr. Booth. "From about 1896 to 1920, times were relatively good for farmers. Of course, there were ups and downs during that time; prices were not uniformly satisfactory, it's true, but, by and large, market conditions were good. Even though they didn't always think so then, we often hear farmers now refer to the time before and during the World War as "good times." It was what economists call a sellers' market. The market for most farm products was fairly good and prices were generally satisfactory. Combination didn't seem necessary. Private dealers in farm products and local cooperative associations were able to sell to advantage and to satisfy both producer and consumer reasonably well. Competition was not so keen.

"Then in 1920 came a complete reversal of conditions. The deflation following the World War, hit farmers worse than most other classes because of the peculiar nature of the agricultural industry. There was a slump in the buying power of the people in Europe, which cut down our foreign markets for farm products. Increased efficiency on the part of farmers had, at the same time, resulted in a larger output by our farms; while changes in the food habits of our home people had made it increasingly difficult to sell staple products. Added to all this we now have strong organizations of buyers represented in what the housewife knows as the chain store. Those changes brought about what we might call a buyer's market with strong competition among sellers."

"You say there were changes in the food habits of our people?" I interrupted. "What sort of changes?"

"Well," explained Dr. Booth, "we have made no detailed analysis of the different changes; but in general the buying habits of our people, it is very apparent, have changed in the direction of more of what we used to call "luxury" products, such as certain fruits.

"Just by way of illustration, among the many changes which have affected the farmer's market is the increase in the number of people living in apartment-houses in cities. With no storage facilities, they buy smaller cuts of meat and smaller quantities of vegetables. Buying in smaller quantities, they have become more discriminating as to quality.

"The high degree of standardization available in manufactured and processed commodities has also encouraged the public to expect the same in farm products. Big cooperative associations have had considerable success in meeting this quality demand. The consumer demands also a steady supply in quantities to suit his convenience.

"Furthermore," continued Dr. Booth, "the consumer expects the producer to make known what he has to offer. And, finally, because of the abundance of farm products, sellers have had to combine forces so as to cut down undesirable and

expensive competition, and to provide the selling advantages which only control of a considerable part of the supply will give.

"These demands of the buyer require a degree of standardization, and warehousing, and financing, and advertising and merchandizing which local cooperative associations can not usually provide. It is this change in economic conditions, this reversal of the relative positions of buyers and sellers, that has brought about the trend toward bigger associations.

"And," he went on to say, "the big associations have developed new markets and new uses for farm products. Often through the larger associations the products reach markets which were inaccessible before. Many of the larger associations have even developed by-product plants to use off-grade products which, in some cases, would either be otherwise useless or might depress the market for the good quality stuff.

"Some have acquired warehouses and cold storage plants to handle seasonal surpluses and special machinery has been installed and even invented and patented by the associations, to handle their products. In such ways, the big associations of local cooperatives are enabling the individual farmers to meet changed conditions."

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CLOSING ANNOUNCEMENT: So we say goodbye to our Farm Reporter, but for today only. Tomorrow he returns to give you some facts on dairying he has dug up in the Department of Agriculture, Washington, D. C.

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UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON

Friday, September 27, 1929

NOT FOR PUBLICATION

Speaking Time: 9 Minutes

Dairy Interview No. 2: LOOKING AT A YEAR'S PROGRESS IN DAIRYING

ANNOUNCEMENT: Dairymen, your Farm Reporter. He has been nosing around the exhibits section of the United States Department of Agriculture and brings you now advance information on some of the things you will see if you can go to the National Dairy Show at St. Louis next month.

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Well, I hope you're all ready to do some quick-change traveling. Because I'm going to take you around the country at a rate even faster than the Graf Zeppelin went around the world. The Bureau of Dairy Industry, and the Department of Agriculture exhibits division at Washington, and the National Dairy Show at St. Louis--we're going to cover them all within the next nine minutes. Are you already? Sit tight!

The first stop is a very brief one. It's at the Bureau of Dairy Industry offices in the main Department of Agriculture building. I went over there to dig up some live topics to interview dairy specialists about-A. B. Nystrom, assistant to the chief of the bureau and the man who edits all of the dairy bulletins, told me that the livest topic he could think of right now was the National Dairy Show.

So I didn't bother to see anybody else. Out I went in search of material on the dairy show. And the first man I saw--in the hall outside Mr. Nystrom's office--was T. E. Woodward. I guess you've heard of Mr. Woodward before. He helps run Uncle Sam's dairy farm at Beltsville and has been on the job there for the last 17 years.

"You've been to lots of national dairy shows," I said, "tell me something about them."

"I'll tell you this much," Mr. Woodward replied, "they certainly are a liberal education for anybody. I can still get more new ideas and fresh enthusiasm from a National Dairy Show than from any other source I know of.

"You know," he went on, "I think it would be a mighty good thing for the dairy industry if more farmers would take in the big Show. One of the great troubles of farm life has been that often the farmer sticks TOO close to his farm and doesn't have a chance to see what the other fellow is doing. That isn't so true as it used to be but it still holds good. Now, I think a trip to the National Dairy Show for instance, might turn out to be profitable in dollars and cents. Any dairy farmer can get valuable practical information from the exhibits on feeding and breeding. He gets new ideas. What he sees is bound to set him thinking. And thinking will lead to improved conditions on his own farm.

"Then, of course, the National Dairy Show is a great thing for the boys and girls. The whole show would be worthwhile, I think, just for the 4-H club members alone. They're the ones who are going to be the leaders in our industry before very many years."

Now I want to introduce you to Mr. H. T. Baldwin. Mr. Baldwin is one of the men in charge of the educational exhibits that the Department of Agriculture prepares for fairs, shows and other public events throughout the year.

Whether you plan to attend the National Dairy Show or not, I think you'll be interested in some of the exhibits that the Department has prepared this year.

One striking exhibit is on the care of milk and cream. The main features are a milk cooler with milk flowing over it, a storage vat containing cans of milk, and a modern steam sterilizer for utensils. There is a balloon in the center of the exhibit, held down by three cables. The balloon represents bacterial count. The cables represent the three essentials necessary to hold down this balloon: cooling promptly, keeping cold, and sterilizing utensils.

Dairy research workers and practical dairymen have found, you know, that milk utensils not properly washed and sterilized may be the greatest source of milk contamination. Therefore, they have to be rinsed inside and outside with lukewarm water as soon as possible after use. Then they are placed in a wash vat, scrubbed with a brush in hot water containing a soda ash or alkaline washing powder, rinsed, and placed in a sterilizing cabinet to be thoroughly steamed.

Another exhibit follows right along this line. It is labeled "How to Produce Clean Milk," and it gives as the three essentials a clean cow, a clean milker, and a clean, small-top milk pail. The exhibit consists mainly of a mechanical cow being milked by a mechanical man. The cow is clean and well-groomed. Hair on udder, belly and flanks is closely clipped, making it easier to keep her clean. The milker himself wears clean clothing and has clean, dry hands.

This exhibit is especially interesting because of its ingenious arrangement. The mechanical cow actually gives milk, and the mechanical man actually goes through all of the processes of milking. And Mr. Baldwin told me that with the mechanical man removed, anyone can milk the cow.

The next exhibit is labeled "Which Job Do You Want?--They Pay the Same!" The scene is the interior of a barn. On one side are shown 13 cows that return a total yearly income over feed coast of only $182. On the other side is shown one-high-producing cow that pays the same return, $182. It doesn't take long to decide which job you'd rather have.

This exhibit is based on tabulation of yearly records of more than 100,000 cows in dairy herd improvement associations. Those records show that cows producing 100 pounds of butterfat a year return an average income over feed cost of only $14. 200-pound cows had an income of $55, 300-pound cows $96, 400-pound cows $138, and 500-pound cows $182. One 500-pound cow, therefore, returns as much income over cost of feed as did 13 cows producing 100 pounds.

There's another exhibit that brings out the necessity of selecting bulls that will increase production in your herd. And another one that compared dairy

and beef type animals. By the way, do you think you can select the skeleton of a dairy cow and the skeleton of a beef cow? You'll have an opportunity if you're at an opportunity if you're at St. Louis next month. The exhibit is composed of three skeletons: one of a champion producing dairy cow, one of a champion show ring beef cow, and one of a high class dairy bull. You'll be invited to study the structural differences and to check up on your judgment.

The main differences in the cows, you'll find through accompanying photographs is in external form and in udder structure. The dairy cow's udder is composed almost entirely of secreting tissue. The beef cow's udder has only a very small area of secreting tissue directly above the teat. And this tissue is imbedded in a large mass of fat.

Then there's an exhibit showing new uses of dairy by-products in cooking. And the Bureau of Plant Industry has an exhibit on pasture. It shows that close grazing--except on range--increases the protein content of pasture plants. And the dairy section of the Bureau of Agricultural Economics has prepared several. I want to tell you about one of them particularly, because its so interesting. from a mechanical as well as a subject-matter standpoint. The exhibit shows four men grouped around one of those machines where you hit with a sledge-hammer and try to ring the bell. Well, the men each hit individually first. None has any success. Then all hit together and naturally they ring the bell. The idea, of course, is to show the advantages of cooperation.

And just one more. Did you know that the United Stated produces enough milk for its own use except for two days of the year? Well that's a fact. One of the Agricultural Economics exhibits brings that out, to show just how stable the dairy industry is. Dairying, you know, is one of the most thoroughly stabilized industries we have.

Now--my time is up. And we haven't taken that trip to St. Louis yet. But at least we have been there in spirit. I hope that many of you can get there in the flesh, too. I'm sure you'll find it worthwhile.

CLOSING ANNOUNCEMENT: Apparently the federal workers have "sold" your Farm Reporter at Washington on the idea that attending the big national show is a real businesss investment. Your Farm Reporter scours the Department of Agriculture for facts of interest to everybody who is connected with or concerned about agricultural industries. To help keep you abreast of new developments in agricultural science and economics the Farm Reporter frequently reminds you of bulletins of the Department of Agriculture which may be obtained without charge, upon request to him. This weeks list of bulletins includes: Farmers Bulletins 1167-F, "Essentials of Animal Breeding," 1540-F, "Smuts of Wheat and Rye and Their Control," 1524-F "Culling the Poultry Flock," and Miscellaneous Circular 108, "Copper-Carbonate Seed Treatment for Stinking Smut of Wheat." Send your request for these publications to the Farm Reporter at Station____or at the United States Department of Agriculture, Washington, D. C.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Monday, Sept. 30, 1929.

Livestock Interview 3: The Proof of the Purebred Pudding

Speaking Time: 10 Minutes

ANNOUNCEMENT: Your Farm Reporter at Washington starts today his third week of service to you through the cooperation of the United States Department of Agriculture and Station_____. Monday, you may have observed, is his day to report on matters of interest to growers of livestock. What's up today, Mr. Reporter?

---ooOoo---

Well, Mr. Announcer, and stockmen, I have pursued another statistic or two to their lairs over the week end, and have got from them what you might call proof of the purebred pudding.

How's that for mixing a metaphor?

Anyway, I was sent out to discover practical proof of superiority of purebred and high grade meat animals over scrubs at the place where superiority counts -- the market.

I betook myself to the editorial offices of the Bureau of Animal Industry at Washington. And there I found Mr. D. S. Burch, the editor of the Bureau, and Mr. John Roberts, one of his assistants, fairly reveling in

"Do me a simple statistic," I urged them, "Do me a simple statistic that even I can understand on why purebreds pay."

"I'll have to do you a couple of statistics, if you are to be instructed", Mr. Roberts volunteered.

But I let that pass and submitted myself to the statistics.

"Inspect this table," said Mr. Roberts.

The table was labeled "Dressing Yields of Livestock."

It informed me that two-year-old cattle carcasses shown at the International Livestock show had dressed out 66 per cent of their live weight. That is, two-thirds of the animal emerged as dressed beef from the slaughter house. BUT market steers grading good at Chicago dressed 58 per cent, and market steers grading common dressed 52 per cent. Likewise,

International Show lambs dressed 55 per cent, good market lambs 51 per cent, and common market lambs 45 per cent. And International Show hogs weighing from 200 to 300 pounds dressed 83 per cent, while good market hogs dressed 79 per cent, and common market hogs dressed 75 per cent.

"What of it?" I asked after taking in the figures.

"Just this," Mr. Roberts replied patiently. "Buyers of slaughter stock naturally will pay the highest prices for animals that will yield the most as well as the best meat in proportion to their live weight. And the animals that yield the most meat are purebreds, crossbreds, or high grades. The International Show animals had the highest dressing percentages in each case because they were chiefly purebreds, or crossbreds and were especially fed to produce ideal carcasses. But they had to be well bred-- to have the ideal conformation -- before they could, by feeding, be made to take on the high finish and quality that made them eligible for the show ring."

"You win," I conceded. "Now, what do your statistics mean to the man who is raising stock to sell, not to show?"

"Well," said Mr. Roberts, selecting a data sheet from a stack at his elbow, "figure it out for yourself. Here's a week's average prices at Chicago on the various grades of steers. Let's sell a good grade steer, and a common grade steer at the market that week. Say each weighed 1,000 pounds. The good steer, at $15.25 a hundred, the week's average price for its grade, brings $152.50. The common steer at $10.25 a hundred, also the week's average, brings $102.50. Margin in favor of the good steer, $50.

"Considering the early maturing qualities of the better-bred beef cattle, it is a pretty good guess that the common steer was a year older than the other, and so would have to be charged with an additional year's keep.

"Now, of course," Mr. Roberts went on, "I'm giving you this example and showing you the dressing tables to illustrate the value of good breeding at the market in a general way. Don't let anyone get the impression, when you tell about our talk, that I mean to say that feeding and care don't play their part in producing market stock that will grade good or better.

"For instance, I know one sheep section where only a small proportion of the lambs grade choice or good at the markets. This in spite of the fact that the lambs are of good breeding. The answer, of course, is poor feeding.

"But, given the same feed and care, our studies show that the animal of good breeding will dress out from 6 to 10 per cent more than the scrub; consequently the well-bred animal grades higher, commands a higher price per hundred."

Mr. Burch -- he's the editor of the Bureau of Animal Industry, you'll recall -- came into the conversation here. "To back up the statistics,"

he advised, "have a look at some of these comments of stockmen." He indicated a stack of questionnaires on the utility value of purebreds returned by more than 600 livestock owners in 45 States. The men owned purebreds, crossbreds, grades, and scrubs -- in all, the ownership of 50,000 head of livestock was represented in those replies.

Leafing through the questionnaires as I did, you'll find scores of notes like these that I picked out to give you the general idea:

From an Oklahoma breeder, "A purebred hog will respond to feed quicker, and do better on the same or less feed than a grade or a scrub." Almost the same words from a Nebraska stockman. He wrote, "Purebreds seem to respond better to the same care and feed and generally put on more gain for the feed consumed." And here's one from a Florida farmer, owning 375 head of cattle, hogs, and sheep, "Purebreds gain more and faster -- about one-third more in the same length of time with the same quantity of feed."

"All very good," I told Mr. Burch after glancing through the questionnaires, "but what about the stockmen who can't just send their present herds to the block, and buy purebreds?"

"Don't be accusing me of urging everybody into the purebred business without the necessary experience on which to build. "Mr. Burch returned. "I'm putting the case for the purebred fairly strong for the sake of emphasis; to get across the point that good breeding is the foundation of the business of producing profitable meat animals. But I know, and you know, and most certainly of all, the stockman knows that feeders and breeders can't arbitrairly choose their animals or their feed. They must, generally speaking, take what animals are available and the feeds that can be used in their locality.

"But you can start with common cattle for example and grade them up with purebred sires, and at a profit. Let me give you one more small set of statistics on that point. They're taken from the records of the famous Shi-a-Bar Farms in western Missouri. There the late Colonel William Rockhill Nelson started some 15 years ago a demonstration with a herd of 200 common cows, picked up at the Kansas City market. Since then, although Colonel Nelson has died in the meantime, the work of grading up that herd has gone on. It will continue for another 15 years.

"We recently summarized the market data for the first 10 years of the experiment. I won't give you the detailed tabulation. It's sufficient for our purposes to note that using $10 per hundred as the market price for an average steer, the first cross of those common cows with a purebred beef sire added $2 a hundred weight to the selling price of the steers resulting. The average of three crosses added $1 a hundredweight more, making a total gain of $3 per hundredweight. This is a direct financial measure of improved breeding.

"Now this shows clearly, too, that the greatest single step toward quality and better market returns occurs in the first cross. This should be gratifying to stockmen seeking greater income from their cattle by

adopting the use of purebred sires. It shows the possibility of early financial benefits following investment in one or more purebred bulls."

"Does that same principle apply to other meat animals -- sheep and hogs?" I asked.

"It does, of course," Mr. Burch replied. "But it should be remarked that there isn't so noticeable an improvement in hogs by the use of purebred sires, simply because the average farm herd of swine is already better bred than that of other kinds of livestock. We know that purebred hogs outnumber the purebreds of other classes of farm animals."

Well, that's all of my excursion into dressing percentage statistics and other facts and figures that I have time to tell you about today. If you want to study those tables and charts for yourself, I'll be glad to get published summaries for you. Ask me for Miscellaneous Circular 74, "Grading up Beef Cattle at Sni-a-Bar Farms," for the Department Circular 241, "Food Animals and Meat Consumption in the United States," and Department Circular 235, "Utility Value of Purebred Livestock."

See you tomorrow.

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ANNOUNCEMENT: Your Farm Reporter brings you tomorrow some facts on the great pear blight epidemic of this last summer, and on how to check its ravages in your trees. Meanwhile, if you want to write for those publications, ask for Miscellaneous Circular 74, "Grading up Beef Cattle at Sni-a-Bar Farms"; Department Circular 241, "Food Animals and Meat Consumption in the United States," and Department Circular 235, "Utility Value of Purebred Livestock." Address requests to the Farm Reporter at Station_____ or at the United States Department of Agriculture, Washington, D. C.